

## REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 1-42 remain pending in the application. By this Amendment, the abstract is amended; and claims 1, 19, 22, 31 and 34 are amended.

In numbered paragraph 1 of the Office Action, the Examiner objected to the Abstract for informalities. The Abstract is amended to address the Examiner's concern. Withdrawal of the objection is respectfully requested.

Applicants acknowledge with appreciation the indication in numbered paragraph 8 of the Office Action that claims 4-9, 11-14, 24-26, 28, 36, 37 and 39 contain allowable subject matter.

In numbered paragraph 3, independent claims 1 and 34, along with various dependent claims, are rejected as being anticipated by U.S. Publication No. 2002/0147728 (Goodman et al.). In numbered paragraph 5, dependent claims 3 and 35 are rejected as being unpatentable over the Goodman et al. publication in view of U.S. Patent 6,185,527 (Petkovic et al.). In numbered paragraph 6, independent claims 19, 22 and 31, along with various dependent claims, are rejected as being unpatentable over the Goodman et al. publication in view of U.S. Patent 6,434,520 (Kanevsky et al.). In numbered paragraph 7, dependent claim 23 is rejected as being unpatentable over the Goodman et al. publication in view of the Kanevsky et al. patent, and further in view of the Petkovic et al. patent. These rejections are respectfully traversed.

Applicant has disclosed a method and system for automatic classification of music (e.g., paragraphs [0029] and [0030]). A music piece is received for determining when the received music piece comprises human singing by analyzing a

waveform of the music piece (e.g., paragraphs [0032] & [0033]). The received music piece is labeled as singing music when the received music piece analyzed waveform is determined to comprise human singing (e.g., paragraph [0031]). The received music piece is labeled as instrumental music when the received music piece analyzed waveform is not determined to comprise human singing (e.g., paragraph [0031]).

The foregoing features are broadly encompassed by Independent claim 1, which recites, among other features, determining when the received music piece comprises human singing by analyzing a waveform of the music piece. Independent claims 22, 31 and 34 similarly recite determining when the received music piece comprises human singing by analyzing a waveform of the music piece. Independent claim 19 recites "determining, in a hierarchical order and for each selected category, when the music piece satisfies the category by analyzing a waveform of the music piece."

The Goodman et al. publication discloses utilizing metadata for each track to build hierarchical database of tracks (paragraphs [0053] and [0057]). However, the Goodman et al. publication does not teach or suggest determining when the received music piece comprises human singing by analyzing a waveform of the music piece, as recited in claim 1. Rather, the metadata as disclosed by the Goodman et al. publication are "the name of the album the track is from, the name of the song, the genre of the song, and the type of track" (paragraph [0054]). Claim 1 is therefore allowable.

The Petkovic et al. patent, considered individually or in combination with the Goodman et al. publication and/or the Kanevsky et al. patent, does not cure the

deficiencies of the Goodman et al. publication. The Petkovic et al. patent was applied for its disclosure of "the absence of detected musical harmonics as a reliable test for speech" (col. 11, lines 29-31). However, in the context of vocal singing, the human singing by its nature does demonstrate musical harmonics. Accordingly, the Petkovic et al. patent teaches away from distinguishing human singing from instrumental music. The Petkovic et al. patent does not teach or suggest at least determining when the received music piece comprises human singing by analyzing a waveform of the music piece, as recited in claim 1.

The Kanevsky et al. patent, considered individually or in combination with the Goodman et al. publication and/or the Petkovic et al. patent, does not cure the deficiencies of the Goodman et al. publication. The Kanevsky et al. patent was applied for its disclosure of indexing segments of audio data file for storage in a database in accordance with identification tags of verified speakers (col. 1, lines 54-56). However, the Kanevsky et al. does not distinguish human singing from instrumental music. The Kanevsky et al. patent does not teach or suggest at least determining when the received music piece comprises human singing by analyzing a waveform of the music piece, as recited in claim 1.

Even if considered in combination as suggested by the Examiner, the Goodman et al. publication, the Petkovic et al. patent and/or the Kanevsky et al. patent do not teach or suggest a method/system for automatic classification of music in which human singing is distinguished from an instrumental music by analyzing a waveform as recited in claim 1, and as similarly recited in claims 22, 31 and 34; and do not teach or suggest "determining, in a hierarchical order and for each selected

category, when the music piece satisfies the category by analyzing a waveform of the music piece," as recited in claim 19.


For the foregoing reasons, Applicant's claims 1, 19, 22, 31 and 34 are allowable. The remaining claims depend from the independent claims and recite additional advantageous features which further distinguish over the documents relied upon by the Examiner. As such, the present application is in condition for allowance.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice of Allowance is respectfully solicited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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By:   
Reg. No. 48,360  
Patrick C. Keane  
Registration No. 32,858

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620